



**Commonwealth Edison**  
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February 17, 1982

Mr. T. A. Ippolito, Chief  
Operating Reactors - Branch 2  
Division of Operating Reactors  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555



Subject: Dresden Station Units 2 and 3  
Quad Cities Station Units 1 and 2  
Response to Questions Concerning  
Generic Item B-24, Containment  
Purging/Venting During Normal  
Operations  
NRC Docket Nos. 50-237/249 and  
50-254/265

Reference (a): T. A. Ippolito letter to L. DelGeorge  
dated December 11, 1981.

(b): T. J. Rausch letter to G. C. Lainas  
dated June 2, 1981.

Dear Mr. Ippolito:

Enclosure 3 to Reference (a) contains five additional information items required to evaluate the Dresden Station Units 2 and 3 and Quad Cities Station Units 1 and 2 conformance to the guidelines of Branch Technical Position (BTP) CSB 6-4, Revision 1, "Containment Purging During Normal Operation." The Commonwealth Edison Company response to these items is contained in Attachment 1 to this letter.

Reference (a) also provided a draft Safety Evaluation Report (SER) for containment purging and venting during normal operation of Dresden 2 and 3 and Quad Cities 1 and 2. To assist you in your review, we are providing in Attachment 2, a clarification of the information contained in Section II of the SER. This clarification more accurately reflects the routine functions of the purge and vent valves.

Under the "Valve Operability" section of Reference (a), please be advised that our Reference (b) response is applicable in addition to the February 27, 1981, letter which you referenced.

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T. A. Ippolito

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February 17, 1982

Please address any questions you may have concerning this matter to this office.

One (1) signed original and fifty-nine (59) copies of this transmittal are provided for your use.

Very truly yours,



Thomas J. Rausch  
Nuclear Licensing Administrator  
Boiling Water Reactors

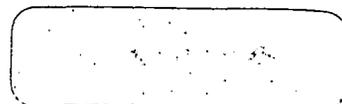
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Attachments

cc: Region III Inspector - Dresden  
Region III Inspector - Quad Cities

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1. Q: Provide an analysis of airborne radiation released to the environment prior to purge system isolation following a LOCA.
- A: An analysis of airborne radiation released to the environment prior to purge system isolation following a LOCA has been completed and is attached for your information. The results of the analysis show that radiation released through the purge and vent system could increase the total airborne radiation released during a LOCA by not more than 40 percent. However, even with this 40 percent increase the off-site doses are still significantly below the whole body and thyroid guideline doses shown in 10CFR100.
2. Q: Provide information concerning the provisions to protect structures and safety-related equipment (e.g. SBGT) located downstream of the purge isolation valves against loss of function from the environment created by the escaping air and steam following a LOCA.
- A: While the purge and vent system is operating, the standby gas treatment (SBGT) system is usually isolated from the purge and vent system by a normally closed butterfly valve. Given the above situation, the attached analysis investigated the pressurization due to a LOCA of the non-safety related piping downstream from the second isolation valve in the vent system. The results of the analysis show that the pipe pressure will not reach pressures that could cause the non-safety related pipe to burst and potentially damage safety related equipment. Therefore, no missiles will be created during this event which could impact structures or safety related equipment.
- On occasion the primary containment is vented through the SBGT system. In this situation the second isolation valve in the vent system is closed and the isolation valve on the six inch SBGT piping is open. Results of the attached analysis shows that the peak pressure due to a LOCA in the SBGT filter train will not exceed the design pressure.
3. Q: Provide a discussion of the provisions to insure that isolation valve closure will not be prevented by debris which could potentially become entrained in the escaping air and steam. Installation of debris screens is one acceptable method of accomplishing this function. If no provisions are considered necessary provide information to justify this conclusion.
- A: No provisions to prevent debris entrainment are considered necessary. The basis for this conclusion is as follows:
1. The drywell is kept very clean such that at the start of a LOCA no loose debris would be present.



2. Since these butterfly valves close very rapidly, typically less than 1.9 seconds from the initiation of a LOCA, any debris or missiles generated by the LOCA would have to be directed straight into the purge or vent line. The probability of a break occurring in a line which could generate debris or missiles capable of entering a purge or vent line is considered very low. Therefore, no provisions to prevent debris entrainment should be required.

4. Q: It is our recommendation that you commit to limiting the use of the purge/vent system to a specified annual time commensurate with plant operational safety needs. Provide such a commitment or justification why such a limitation is considered unnecessary.

A: Such a limitation is considered unnecessary because primary containment venting and purging are required to inert the containment, de-inert the containment, control containment pressure, reduce containment oxygen concentration, and to establish and maintain a pressure differential between the drywell and suppression chamber. During these operations, established approved procedures are used, which do not involve the bypass of any trip functions whatsoever, and which do not render any purge or vent isolation valves inoperable. Venting and purging are necessary operations that are performed to maintain the proper containment pressures and oxygen content to mitigate the consequences of a LOCA. Thus, these operations cannot be prohibited or restricted without jeopardizing the availability of the units.

5. Q: We request that you propose Technical Specification changes incorporating the test requirements set forth in Enclosure 1 together with the details of your proposed test program. If the results of current and past surveillance and operating experience are believed to demonstrate operability of those valves, provide this information as justification for not modifying the surveillance requirements.

A: Commonwealth Edison does not believe that additional leakage integrity tests on these valves are warranted at this time. The Local Leak Rate Tests (LLRT) failures observed to date do not, in general, indicate through leakage. When specific problems are observed in a valve, actions are taken to correct the immediate problem and provide long term improvement, when appropriate.

Contrary to paragraph 4 of Enclosure 1 to the referenced NRC letter, a Unit shutdown would be necessary to perform leakage tests of the containment vent and purge valves. Closing valves AO-1601-55 and 56 would cause a loss of DP between the drywell and torus, which is required to be maintained during normal operation. Further, if there were a large leak associated with an inboard drywell vent or purge valve, pressurization of the test volume could possibly cause the drywell pressure to reach 2 psig. This would result in an unnecessary reactor scram, a Group II primary containment isolation, and an ECCS initiation.

In addition, Commonwealth Edison does not expect that the Dresden and Quad Cities Units would have a need to go to a cold shutdown (with containment de-inerted as required to perform LLRTs) several times a year, or even twice a year.